

Application No. 09/325, 110  
Amendment dated January 19, 2004  
Reply to Office Action of November 7, 2003

### REMARKS/ARGUMENTS

Applicant wishes to thank the Examiner for considering the present application. In the Office Action dated November 7, 2003, claims 1-8, 10-13 and 15-31 are pending in the application. Applicant respectfully requests the Examiner for reconsideration. Some cosmetic changes, including correction of typographical errors, have been made to Claim 1 (deletion of extraneous comma) and Claim 15 (adding "said" before "satellite") and Claim 20 (adding "of" after "step"). These changes are not narrowing amendments.

Claims 1, 3-7, 10-13, 15-17 and 28-31 stand rejected under 35 USC §103(a) as being unpatentable over *Thompson* (US Publication 2001/0034206) in view of *Brown* (6,157,621). Applicant respectfully traverses.

The system of Claim 1 includes at least one reconfigurable satellite. The reconfigurable satellite has a routing table storing tuning information therein and a controller located on the satellite coupled to the communications control circuit. The controller controls the frequency reconfiguration of the communications control circuit through the programmable frequency synthesizer in response to the tuning information from the routing table. Claim 15 also recites a reconfiguration circuit having a routing table and a programmable frequency synthesizer.

With respect to *Thompson*, the Examiner states that, "Thompson does not clearly teach the controller located on a satellite and a routing table storing tuning information." Applicant respectfully submits that no teaching or suggestion is found in *Thompson* for a routing table.

The Examiner cites the *Brown* reference for teaching a routing table having the synthesizer tuning information. Applicant respectfully submits that the *Brown* reference does not teach or suggest a routing table having tuning information to control the frequency reconfiguration of the control circuit. Admittedly, the *Brown* reference teaches a routing table. However, the routing table is a conventional routing

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table that is used to store the desired path of the communication. The *Brown* reference is directed to a satellite communication system that includes about 840 satellites grouped in sets of 40, circling the globe in 21 separate low earth orbits. On page 3 of the Office Action, the Examiner alleges that, "In Fig. 27,28 *Brown* considered the synthesizer 284, 308, in the reconfiguring circuit, for tuning to the frequency according to the routing table above. *Brown* considered the utilization of the on-board computer, the adaptive routing processor for selecting the best route pathway according to routing table." The section cited by the Examiner has been reviewed and and no teaching or suggestion was found of the frequency reconfiguration of the communication control circuit through the programmable synthesizer in response to tuning information stored in the routing table. Applicant respectfully submits that the routing cache memory is merely a standard routing table that communicates the route of the signal to the next satellite in the system. In Col. 43, lines 19-23, of the *Brown* reference, it is stated that, "Hardware and software that are collectively called the 'router' must continually adapt to the changing topology. The time varying network topology is irregular, unlike conventional regular networks that utilize ring, cube or star topologies." As further stated in Col. 43, line 24: "The network topology also changes when new satellites are deployed, when the useful lives of old satellites come to an end, or when satellite and link failures occur. The traffic density or 'load' on links changes randomly due to normal traffic fluctuations." While it is contemplated that new satellites are to be deployed into the system or that old satellites will ultimately fail, no teaching or suggestion is provided for frequency reconfiguration. As is stated in Col. 44, lines 32-35: "The constellation uses the 20 and 30 GHz frequency bands for communications between Earth and the constellation, and the 60 GHz band for communicating among the satellites." Thus, no teaching or suggestion is provided for changing the frequency of communication. Choosing a routing path is not the same as changing the frequency of the programmable frequency synthesizer.

Application No. 09/325,110  
Amendment dated January 19, 2004  
Reply to Office Action of November 7, 2003

Because neither the Thompson reference nor the Brown reference teaches or suggests that the controller controls the frequency reconfiguration of the communications control circuit through the programmable frequency synthesizer in response to the tuning information from the routing table, Applicant therefore respectfully requests the Examiner to reconsider the rejection of claim 1. Claim 15 should also be allowable for generally the same reasons set forth above. Likewise, claims 3-7, 10-13 and 16-17 depend from either claims 1 or 15 and are therefore allowable for the same reasons set forth above.

Claim 28 is similarly directed to a method of reconfiguring the frequency configuration of the satellite. Claims 29-31 are further limitations of claim 28 and are also believed to be allowable for the same reasons.

Claims 2 stands rejected under 35 USC §103(a) as being unpatentable over *Thompson* in view of *Wiswell* (6,205,319). Claim 8 stands rejected under 35 USC §103(a) as being unpatentable over *Thompson* in view of *Galvin* (6,182,927). Applicant respectfully traverses.

Neither the *Wiswell* nor the *Galvin* references teach or suggest storing the tuning information in a routing table and then using that information to do the reconfiguring.

Claims 18-20 stand rejected under 35 USC §103(a) as being unpatentable over *Thompson* in view of *Reesor* (4,472,720). Applicant respectfully traverses.

Claims 18-20 are directed to a method for configuring a satellite system. The system uses a reconfigurable satellite that has reconfiguration instructions transmitted thereto. Claim 18 has been amended to clarify that reconfiguring the frequency configuration of the reconfigurable satellite is performed in response to the tuning information in a routing table. The Examiner admits that *Thompson* does not clearly teach or suggest the repositioning of a satellite.

Application No. 09/325, 110  
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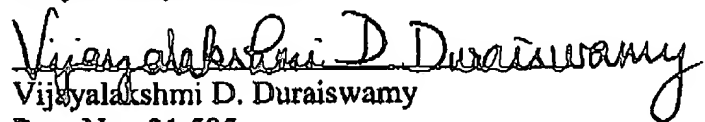
The Examiner has cited the *Reesor* reference for the teaching of repositioning a satellite. Although the *Reesor* reference teaches repositioning a satellite, the repositioning is only a slight repositioning in response to a correction signal transmitted by a ground station transmitter means. The resource system is a system of geosynchronous satellites that may be adjusted during the operation to maintain a relative position therebetween. The satellites always maintain a generally similar position. The payload in *Reesor* thus does not need to be configured.

Therefore, no teaching or suggestion is provided in the *Reesor* reference for replacing one satellite with another as well as reconfiguring a payload. Likewise, claims 19-20 are further limitations of claim 18 and are also believed to be allowable for the same reasons set forth above.

Claims 21-27 stand rejected under 35 USC §103(a) as being unpatentable over *Thompson* in view of *Reesor* (4,472,720) in further view of *Brown*. Applicant respectfully traverses. Claims 21-27 are further limitations of claim 18 and are also believed to be allowable for the same reasons set forth above.

In light of the above amendments and remarks, Applicant submits that all objections and rejections are now overcome. The application is now in condition for allowance and expeditious notice thereof is earnestly solicited. Should the Examiner have any questions or comments which would place the application in better condition for allowance, he is respectfully requested to call the undersigned attorney.

Respectfully submitted,

  
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Page 11 of 11